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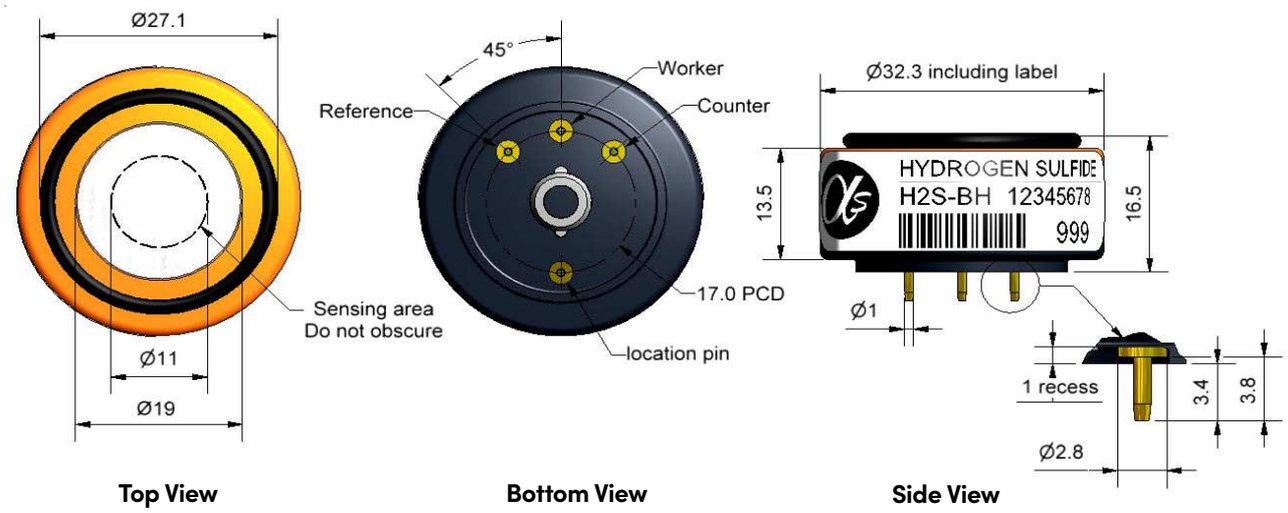
AMETEK

H2S-BH Hydrogen Sulfide Sensor – High Sensitivity



Top View **Bottom View** **Side View**

Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 20ppm H_2S1		1400 to 2200
	Response time	t90 (s) from zero to 20ppm H_2S		< 55
	Zero current	ppm equivalent in zero air		< ± 0.15
	Resolution	RMS noise (ppm equivalent)		< 0.02
	Range	ppm H_2S limit of performance warranty		50
	Linearity	ppm error at full scale, linear at zero and 20ppm		-1 to -2
	Overgas limit	H_2S maximum ppm for stable response to gas pulse		200
Lifetime	Zero drift	ppm equivalent change/year in lab air		< 0.03
	Sensitivity drift	% change/year in lab air, monthly test		< 1
	Operating life	months until 80% original signal (24-month warranted)		> 24
Environmental	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 20ppm		80 to 93
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 20ppm		100 to 110
	Zero @ -20°C	ppm equivalent change from 20°C		< ± 0.5
	Zero @ 50°C	ppm equivalent change from 20°C		< 0 to 1.5
Cross-sensitivity	NO_2 sensitivity	% measured gas @ 10ppm	NO_2	< -20
	Cl_2 sensitivity	% measured gas @ 10ppm	Cl_2	< -25
	NO sensitivity	% measured gas @ 50ppm	NO	< 3
	SO_2 sensitivity	% measured gas @ 20ppm	SO_2	< 15
	CO sensitivity	% measured gas @ 400ppm	CO	< 1
	H_2 sensitivity	% measured gas @ 400ppm	H_2	< 0.25
	C_2H_4 sensitivity	% measured gas @ 400ppm	C_2H_4	< 0.15
	NH_3 sensitivity	% measured gas @ 20ppm	NH_3	< 0.1
Key Specifications	Temperature range	°C		-40 to 50
	Pressure range	kPa		80 to 120
	Humidity range	% rh continuous		15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)		6
	Load resistor	Ω (recommended)		10 to 47
	Weight	g		< 13

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For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. or visit our website at "www.alphasense.com".

Figure 1 Sensitivity Temperature Dependence

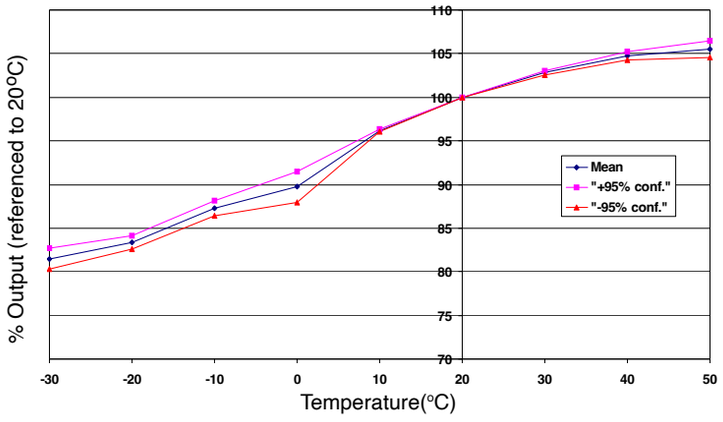

Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors. The mean and ±95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

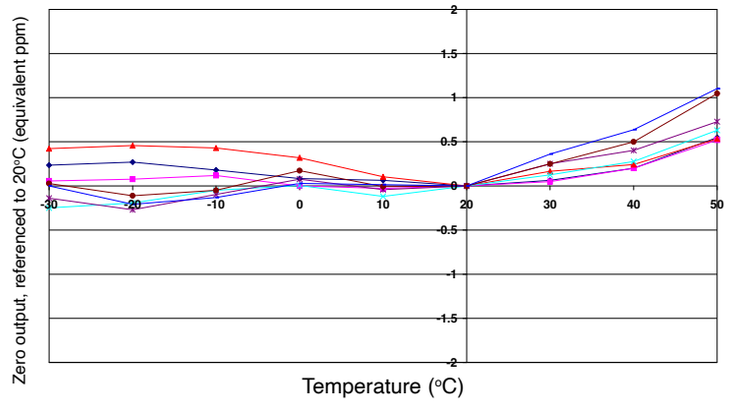

Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Zero Long-term Stability

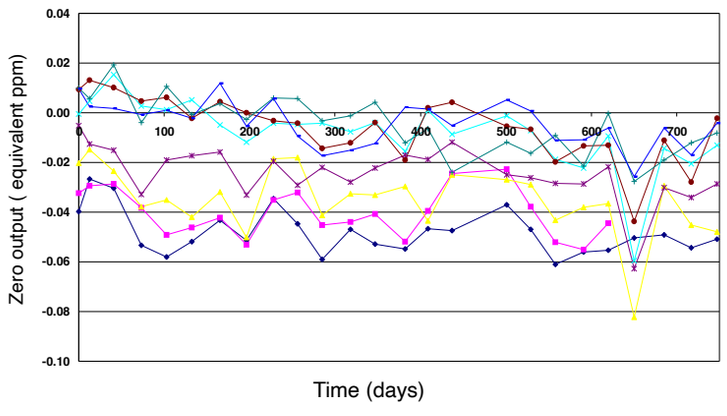

Figure 3 shows the excellent zero stability for the H_2S-BH over 2 years, ensuring that low-level alarms will remain stable.